REPORT

ON THE

OPERATIONS OF THE AGRICULTURAL DEPARTMENT,

MADRAS PRESIDENCY,

FOR THE OFFICIAL YEAR

1887-88.

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1889.

PROCEEDINGS OF THE BOARD OF REVENUE

(Revenue Settement, Land Records and Agriculuure).

Read—the following G.O., dated 18th December 1888, Nos. 872, 872A, Revenue :—

Read—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 16th August 1888, No. 422 :—

W. Wilson, Esq., M.A., C.S.

Resolution—dated 16th August 1888, No. 422.

The Board resolve to submit to Government their report on the operations of the Department of Land Records and Agriculture during the year ending 31st March 1888.

2. The most important change effected during the year was the reorganisation of the Board of Revenue, under which a Member of the Board was made Director of the Department of (Revenue Settlement) Land Records and Agriculture. The change was carried out from 1st April 1887. From that date to 3rd July 1887, the Hon'ble Mr. Whiteside was Director as Acting 3rd Member. He was succeeded by Mr. Grose. Proposals were submitted for remodelling and strengthening the superior staff of the department, but Government considered that, for the present, the only addition to the staff that was required was a Sub-Assistant Director of Agriculture, who would work ordinarily under the Inspector of Cattle Diseases; but during the absence on leave of the Assistant Director of Agriculture, or at the time of agricultural shows, could be otherwise employed at the discretion of the Director.

I.—Organisation and Maintenance of Village Records.

3. The condition of the village records is on the whole fairly satisfactory. The form of register of agricultural stock has been simplified, and arrangements have been made for the annual numbering of cattle on a uniform system throughout the Presidency and at a time when all the stock are likely to be in the villages. The new forms of village accounts have been introduced into all the districts except South Canara and Malabar, where the system of land tenure is peculiar and separate forms of accounts are in use.

4. The agency employed for the supervision of the village records is still in an unsatisfactory state. Proposals for improving it have long since been submitted for the consideration of the Government of India, but another year has passed and no effect has yet been given to the reiterated suggestions of this Government.

5. The number of Revenue Inspectors who passed during 1887-88 the survey test prescribed for them in 1885 was 87. The total number of these officers who have passed this test up to 1887-88 is 204 as detailed below :—

District.	No.	District.	No.
Ganjam	7	Madura	4
Vizagapatam	4	Coimbatore	33
Godávari	11	Nílgiris	1
Kistna	11	South Canara	10
Bellary	19	North Arcot	18
Kurnool	14	Chingleput	22
Nellore	10	South Arcot	16
Salem	8		
Malabar	12	Total ...	204
Tinnevelly	4		

6. Definite proposals were submitted regarding the training and examination of candidates for the post of village munsifs and karnams (accountants). A manual for the use of village officers (and Revenue Inspectors) was prepared by Mr. Farmer, C.S., under the orders of Government and has been circulated to Collectors for opinion.

II.—The analysis of districts with reference to their security from famine.

7. The examination of the Kurnool district and the checking of a special return of agricultural stock were completed in May 1887. The district has been divided into nineteen agricultural tracts, and the existing statistics tabulated by the agricultural inspectors, with such assistance as the existing district establishments could afford; the results have been worked up and the analytical account of the district prepared by Mr. Benson. This is now in the press and will shortly be issued. Arrangements are in progress for taking up the analysis of the Cuddapah district, and field work there is now being commenced. Acting on a suggestion of the Government of India, it has been resolved that in future analyses, the tractwar plan shall be abandoned, and the analysis proceed village by village. To facilitate this, a series of forms following the lines of the "Purgana Book" of the North-Western Provinces has been devised for the registry of village statistics—Board's Proceedings, No. 120, dated 8th March 1888. The duty of supervising the preparation of these statistics and of drawing up the analyses of districts based on them and on his own observations has been entrusted to the Assistant Director, Mr. C. Benson. It is hoped that when the taluk establishments are strengthened, it may be possible for them to perform the greater part of the work now done by the special staff of agricultural inspectors.

8. A most valuable and interesting report on the Anantapur district was received during the year from the Collector, Mr. Nicholson, which will be of the greatest assistance in carrying out the analysis of that district, which has only been deferred pending the completion of the survey and settlement operations now in progress there.

III.—System of collection of revenue and rental in precarious tracts.

9. There is nothing special to record under this head.

In this Presidency, the Government revenue is collected in instalments fixed with reference to the requirements of the several districts. In 1886 it was decided that, except in Tanjore where eight instalments, from November to June, are paid, there should, for all other districts, be only four in-stalments, from December to May. The revised kistbandi (scale of instalments) has been introduced in some districts and in the rest it has been deferred pending the orders of Government as to the date from which and the order in which it should be introduced into them.

IV.—Measures of protection.

10. *Communications.*—The Guntakal-Nandyál section of the Bellary-Kistna State Railway—90 miles—was opened for traffic on the 11th July 1887. The line from Tirupati to Nellore—83 miles—was opened for traffic on the 15th September 1887. On the Madras Railway, South-west line, the Pálghat branch (2½ miles) and the Calicut extension (9 miles) were opened for public traffic on the 2nd January 1888. The extension of the Nizam's Guaranteed Railway from Warangal to the Singareni coal fields was opened for public traffic on the 1st January 1888, and it is hoped that the extension from Donakal, the junction for the coal fields, to Bezváda will be opened before the close of the current year. There are other lines, some under survey, others under construction, which, when completed, will serve largely to protect the country from the effects of famine.

11. *Irrigation.*—The Barur tank supply channel and its head-sluice were for the first time brought into use during the year under review.

12. *Minor Irrigation Works.*—The year's allotment for, and the outlay on minor irrigation works were Rs. 3,00,000 and 2,92,181, respectively, against Rs. 2,75,000 and 2,60,000 in the previous year. The expenditure in the year was therefore about 95 per cent. of the allotment.

13. *Agricultural advances.*—The amount of loans granted under the Land Improvement Act was Rs. 79,008 and that under the Agriculturists Loans Act,

Rs. 38,649. The total amount of advances made was thus Rs. 1,17,657 against Rs. 24,967 in the previous year. The advances amounted to over Rs. 5,000 in each of the districts of Anantapur, Tinnevelly, Coimbatore and Salem.

14. *Native arts and manufactures.*—Mr. Havell, Superintendent, School of Arts, visited the districts of Coimbatore and Malabar on a tour of inspection, in the beginning of the current calendar year. His report was submitted to Government with the Proceedings of the Board of Revenue, dated 11th May 1888, No. 211. The industries that came under his notice were purely local. None seem to be particularly flourishing, while those that have come into contact with foreign competition—for example, cotton-weaving and iron-smelting—seem to be on the decline or actually dying out.

15. *Fodder and fuel reserves.*—These are not administered in this department, but it may be noted that during the year 714 square miles were constituted reserved forests and 1,724 square miles reserved lands, thus raising the extent under the two heads to 3,026 and 9,217 square miles, respectively, at the end of the year 1887-88.

16. *Ensilage.*—In 1886, the Government directed that certain experiments should be carried out by selected officers, and a report on the results has recently been submitted to Government. Experiments were made in the marginally-noted districts, and altogether 78 silos have been opened, of which 32 were partially or wholly successful. In some cases want of care or want of knowledge vitiated the results, but deducting these, 58·5 per cent. of the silos were more or less successful. The experiments were conducted under unfavorable conditions. Many of the officers to whom they were entrusted had no special knowledge of the subject, and some were removed, from the stations were the experiments where made, before completing them.

Vizagapatam.	North Arcot.
Godávari.	Salem.
Kistna.	Chingleput.
Nellore.	South Arcot.
Cuddapah.	Trichinopoly.
Anantapur.	Tinnevelly.
Bellary.	Nílgiris.

17. The experiments made confirm the knowledge that silage can be easily made with but little care; that most cattle will eat it readily enough, and some even greedily, but as yet they have given no data on which to base definite conclusions regarding the cost of carrying out the process; nor has it been possible to do anything towards a proper comparison of the feeding value of silage with that of ordinary hay, or with green fodder raised artificially by the aid of irrigation. Attention will be directed most closely to the first of these points, and the others will be noticed as opportunity offers. The experience * of Mr. J. W. Hockin, of Vayitri in the Wynaad, was to the effect that charging only for the collection and storage of the grass, which itself cost nothing, he could turn out silage at a cost of 20 cubic feet a rupee; this quantity he reckons to be sufficient feed for 25 head of cattle a day.

* Report in Board's Proceedings, No. 34 dated 25th July 1888.

18. *Fodder plants.*—No further reports have been received regarding the *edible cactus* referred to in paragraph 15 of the report for last year, but it appears probable that the plant was introduced long ago; it is to be found in many villages throughout the Chingleput district. Further inquiries are being made on the subject.

19. An investigation has been commenced with the aid of the Chemical Examiner into the feeding value of the different fodders used in the country. So far the investigation is incomplete, but it is expected that it will be concluded at an early date.

20. *Arboriculture.*—This subject does not ordinarily come under the survey of the department, experiments in arboriculture being conducted by the Forest department under the direction of the Land Revenue Commissioners; but on the suggestion of Mr. Weld, of the Civil Service, further inquiries are being made for the seed of *eucalyptus* which may be expected to flourish in tropical India, and the Secretary of State has been asked to obtain a supply of the seed of the Peruvian Custard apple (*anana cherinalia*) which is believed to be superior to the variety commonly grown in this Presidency.

21. During the year a monograph on the cocoanut palm, prepared by retired Deputy Surgeon-General J. Shortt for the department, was published.

V. Agricultural Experiments.

22. *Farms.*—No Government farm now exists in the Presidency, except the stock-farm alluded to further on. *The Madura farm* is the only institution of the sort towards which Government contributes any support. The farm was visited by the Assistant Director in August during his tour with Mr. Caine, and arrangements were then made to carry out an experiment in shade-drying tobacco. On the occasion of this visit the farm was found in an unsatisfactory state, but the whole question of the continuance of Government support to it was at the time under discussion and the Director's proposals on the subject have since been laid before Government. As far as the conditions under which it is placed have allowed, the farm has hitherto fairly fulfilled expectations, but the Farmer's club, under the auspices of which it was started, has ceased to exist, and unless some other controlling authority can be put in charge, the institution will and must still further languish, if it does not die of inanition. It has been recommended that the Government grant should be continued, if the farm and the property thereon be transferred to the District Board and managed by them, subject to inspection by this department.

23. *Experiments with crops.*—No further experiments were made during the year regarding the growth of *wheat* in any part of the Presidency, but several inquiries regarding the crop have been received by the department from districts where the crop is not at present grown. The *barley* distributed on the Nílgiris during the early part of 1886 continues to give great satisfaction, and recently a further supply of English seed has been obtained for distribution. The Nílgiri Brewery Company are reported to have purchased last year nearly 5,000 bushels of seed grown from the English barley imported in 1886 at an average price of Rs. 1-12-0 per bushel, and the sample is reported to be superior to local grain for malting purposes. Several common causes of depreciation of the samples have been pointed out and detailed instructions have been drawn up, by attention to which the native growers may learn how to produce a better and more valuable crop. A small competition was held at Kethi in October at which several small prizes were awarded for the best samples of barley produced, and it is intended to inaugurate in the current year a regular system of field contests in order to encourage the improvement of the growth and management of this crop.

24. The Collector of the Nílgiris pointed out that there was a large demand for horse forage of superior quality about Coonoor, Wellington and Ootacamund, and suggested that a supply of seed oats should be obtained for supply to the native growers of the Nílgiri plateau. The Secretary of State was thereupon requested to furnish the department with 50 bushels during the year. They arrived in April last, but, owing to an unfortunate mistake in the office of the Agent for Government consignments, they were not forwarded to the Collector or to the Board until the end of July, and thus a season has been lost.

25. During August and September last, Mr. Caine, professional tobacco-curer, was deputed from the Andamans on a short visit to the Presidency, and after visiting the Kurnool, Trichinopoly, Madura and Coimbatore districts in company with the Assistant Director, submitted a report on his observations. The conclusion which his limited observation of the actual cultivation of the plant enabled him to formulate was that the conditions of growth must be considerably modified if a cigar tobacco of good quality is aimed at, and that the system of drying and curing the leaf generally in vogue is fatal to the production of good tobacco. Mr. Caine is expected to return to the Presidency for 18 months in September next, and proposals for his employment have been submitted to Government (Board's Proceedings, No. 278, dated 18th June 1888).

Before leaving, Mr. Caine wrote out a few brief instructions for carrying out some experiments in shade-drying tobacco that were to be undertaken in the Kurnool district and on the Madura farm. No report has been received regarding either, and the results cannot be determined until Mr. Caine has inspected the leaf dried under his directions.

26. The *Baltic linseed* received from the Secretary of State was distributed to the Collectors of Bellary, Kurnool, Cuddapah and Vizagapatam for experiment, but the

seeds were received very late in the season and reached Kurnool, which is at present the chief linseed-growing district in the Presidency, too late for sowing on dry land. The Collector, however, arranged to sow them as a second crop in wet land. In the Bellary and Cuddapah districts, in every case where the seed was sown, the result was a failure. In Vizagapatam the seed was sown and the plants grew and flowered, but did not produce any pods with seed.

27. During the year a small quantity of *Puerh tea seed* was received from the Government of India and forwarded to the Nílgiris for distribution to planters for experiment, but it is reported that the seeds did not germinate.

28. The experiments made at Mangalore during the year with the *evaporating apparatus* obtained from America for extracting sugar from *sorghum* resulted in failure, and it is not intended to carry on further experiments as no adequate arrangements for conducting them are possible at present, and it appears doubtful from American reports whether there is much possibility of a sorghum sugar industry attaining success unless it be carried on in large factories.

29. *Hungarian millet seed.*—Only some of the officers to whom this seed was distributed have reported on the experiment. In Anantapur, Bellary and Kurnool the season was not favorable, and the seeds are reported to have been kept for trial during the current year. In Salem, some seeds failed and some germinated, but unfortunately the seedlings were eaten by cattle. In the Botanical Gardens, the seeds did not germinate at all and the Principal of the College of Agriculture, Saidápet, reports that the seeds were tested and found to have lost their vitality.

30. *Insects.*—Several specimens of insects were forwarded during the year to the Superintendent of the India Museum, Calcutta, for identification, but it is evident that, without trained observers to collect the specimens, much good cannot ordinarily be done in this way. One specimen having been sent up from Ganjam under a single name was found to contain the pupœ of no less than three species of moth. In consequence of this no really valuable information has been collected.

31. *Indigo.*—An inquiry was made during the year, at the instance of the Madras Chamber of Commerce, on the subject of the adulteration of indigo, with no further result than to show that the practice is a long standing one, but that it was not known whether or to what extent aniline dyes were used for the purpose. The admixture of mud with the cake appears to be common.

32. Another inquiry conducted at the instance of the Government of India showed that town refuse and night-soil are not nearly so largely used in this Presidency as they might be, and that, judging from the results obtained in some places, *e.g.*, Kurnool, where Rs. 82 per 1,000 of population is realised from the sale-proceeds of the refuse, a valuable set-off against the cost of conservancy might be gained by Municipalities from this source, and that, by degrees, the prejudices against the use of nightsoil may disappear and its value as a manure be fully appreciated.

33. *Exhibitions.*—Three mofussil exhibitions were held during the year under report, but that at Erode was alluded to last year having been held on the 19th to 21st April. The other two shows were held at Bellary and Salem on the 16th and 17th February and 23rd and 24th March, respectively, and were on the whole successful.

34. *Glasgow International Exhibition.*—75,000 cigars were collected in the Agricultural Department from the districts of Godávari, Trichinopoly and Madura and sent to the exhibition, and all Collectors were instructed to afford assistance to the local Committee in collecting exhibits.

35. *The introduction of improved implements and machines.*—One of the most satisfactory features of the mofussil shows was the evidence they produced that considerable attention is being paid in many quarters to the question of devising cheap and efficient water-lifts, a question of the greatest importance in this country; another feature which evidences progress is the extent to which improved sugar mills are coming into use in different parts of the Presidency. Improved ploughs also appear to be taking more hold on the country and to be more utilised in actual work year by year. This may seem to be but a poor return for years of labor and the expenditure of much money by Government in the endeavour to improve the agriculture of the country, but in a

land so backward and poor and conservative as India, the work of the leaven of progress is sure to be slow at first, but that it *is* working these signs seem to prove.

36. The plan of organizing and sending out into the districts a travelling show of agricultural implements first attempted on a definite system in 1886 was followed up in the year under report, and a show visited parts of the Coimbatore, Salem and North Arcot districts and would have proceeded further, if it had not been stopped short owing to the prevalence of cholera in the latter district. The show commenced at Coimbatore at the end of June and ended at Sholingur on the 7th September. It was in direct charge of the Assistant Director for part of the time and was, when he left it, carried on by an Agricultural Inspector. The results of the show were generally satisfactory and the ryots generally admitted, as others at other times and other places have admitted, the efficiency and completeness of the work done by the ploughs exhibited before them, but took, as so many before them have done, three objections to them as practicable implements for the Indian ryot. These were (1) their high cost (2) the difficulty of repairing them locally, and (3) their heavy draught. The last is not a solid objection, for in the case of the smaller ploughs, the draught is not more than the ordinary cattle of the country can easily manage. To remove the other objections the Government cannot do much ; the first is the business of the manufacturer, the second of the ryot himself. All that Government can do it has done in procuring facilities in first-class workshops in Madras for the the free instruction of village blacksmiths in the art of repairing their ploughs and in permitting district officers to act as intermediaries between the ryot and the manufacturer in procuring ploughs and other implements or parts of them.

37. An inquiry was instituted during the year regarding the extent to which the ploughs sold in the southern districts during the continuance of the travelling show of 1886 were used. The result of the inquiry was as follows :—

District.	Ploughs.		Area ploughed with improved ploughs.	
	Bought.	Used.	Total.	Per plough.
South Arcot	104	84	537·5	6·3
Tanjore	56	42	151	3·6
Trichinopoly	25	16	69	4·3
Tinnevelly	65	63	442	7·1
Total ..	250	205	1,189·5	5·8

Information regarding a few of the ploughs entered as not used could not be obtained and a few are not accounted for. On the whole the results are encouraging and a continuance of the system during the current year has been resolved on.

38. Besides assisting and taking part in the travelling show, one firm, Messrs. Massey and Co., placed a number of ploughs at the disposal of the Collector of the Kistna for demonstration purposes, but nothing further has been heard of the matter as yet. The same firm also, it is believed, have on their own account, in continuation of the plough trials held during the Bellary exhibition, been conducting some demonstrations with their cotton-soil ploughs in the Bellary and Anantapur districts, and, it is understood, with good results as to the sale of their implements.

39. A further attempt was made during the year to show the value of the bamboo-seed drill to the ryots of Trichinopoly, but though the implement was worked at nine places, owing to the want of rain at the time, the drill could not be worked in a really satisfactory manner, and the ryots repeated their objections to its use as noted at paragraph 27 of the last report. The difficulties experienced in the attempts made to bring home the advantages of the system of drill sowing to the ryots of the southern districts, although it is generally practised in the northern, will illustrate the nature of the difficulties that attend the attempt to introduce improvements in the agricultural practice of the country.

40. It appears from the replies to inquiries made regarding the advisability of exhibiting the Beheea sugar-mill in different districts, that it is already largely used in the Bellary and Godávari districts, and also that it is being purchased freely in the Trichinopoly district. Besides this, the local agents for "Shank's patent sugar-mills"

report that their mills are being taken freely by ryots from different parts of the country, and they have offered to send out mills for exhibition in charge of a competent man to any district where the Collector can arrange to have them shown. It appears, therefore, that this department need now do but little to show the value of these machines to the ryots, but in view of the desirability of inducing the manufacturers to turn out lower-priced machines, it is proposed to hold a competition at which they shall be asked to exhibit for trial mills costing not more than Rs. 100. Messrs. Thomson and Mylne's improved sugar-boiling pans have not met with favor generally in this Presidency, and an offer of theirs to instruct sugar-cane growers in the making of grain sugar could not be accepted owing to the fact that the growers in the Presidency were not willing to defray the cost of the experiment.

41. *Sericulture.*—The proposals made during the year for detailing a special officer to make systematic arrangements for collecting cocoons and rearing silkworms of the tassar silk moth were accepted by Government, and are now being carried into effect. It is hoped that this may be the first step towards the creation of an important industry which will give employment to a large number of people. It is proposed at first to confine operations to the Chingleput district, but if the industry becomes established there, it may be extended to others. The suffocating machines have been obtained from Calcutta, and there is now no bar to the prosecution of the experiment.

VI.—Cattle Breeding and Veterinary Inspection.

42. *Cattle and Sheep Breeding.*—The acquisition of a block of land near Hosúr in the Salem district was sanctioned during the early part of the year, and arrangements were at once made for the erection of the necessary shedding for the accommodation of the stock, which were transferred from Saidápet during December last. Purchases on a small scale were made during the remaining months of the year, but the officer entrusted with the duty did not succeed in obtaining many bulls during the time he was specially deputed for the purpose. It is intended to purchase young bulls and, after keeping them at the depôt for a few years, send them out into selected localities in the Coimbatore and Salem districts to serve as sires. At the same time, endeavours will be made to induce the ryots in these localities to castrate their own inferior bulls at such an early age as will render it impossible for them to do any harm amongst the herds.

43. The depôt at Hosúr is in charge of an overseer under the orders of the Assistant Director and occasionally Mr. Shunker, the Deputy Inspector of Cattle Diseases, is able to inspect it, but the arrangements are admittedly tentative and may possibly need revision at an early date. It is not, however, possible to expect any results from the experiment unless it be continued for several years and unless the utilisation of the bulls after they have been sent out is carefully supervised by the district officers.

44. The cattle moved to the depôt from Saidápet were chiefly of the Aden breed, and several bulls of that breed have already been stationed in different districts. The bulls purchased were all of the Alambadi breed which is bred on the banks of the Cauveri in the Salem and Coimbatore districts. The Government, early in the year, ordered the transfer of the Amrit Mahal cattle stationed on the Palnis and at Devikolam to the depôt. This was carried out, but the stock on arrival at Hosúr was found to be so poor that its disposal has been recommended. The small sheep-flock which had been maintained at Saidápet and bred there with great care for many years was transferred to the depôt with the cattle and it is intended to increase the flock largely and endeavour to obtain some superior rams to breed from, with the object of improving the wool-producing quality of the flock. A number of rams from the existing flock are now being sent to the Coimbatore district and more are available.

45. The number of bulls belonging to the department stationed in the districts was increased from two at the beginning of the year to seven at its close. Of these, one is stationed at Madura, one in South Canara, three in Coimbatore and two in Salem. At Madura there is also another bull presented by Government to the Farmers' Club, which is partially utilised. Several other bulls have been at various times placed in the hands of private individuals for breeding purposes. All are of the Aden breed. Accurate statistics as to the number of cows covered by these bulls are not available in all cases, but, so far as can be ascertained, the bulls sent out hitherto by the

department have on the whole been fairly utilised and have done fairly good service. It has been found, however, that many of the Adens are sluggish in serving.

46. *Pony Breeding.*—These operations were in charge of the Collector of Coimbatore and Mr. Dumergue, the Sub-Collector of Salem, during the year under report, the former officer being assisted by Mr. Shunker during the covering season. To Mr. Shunker is also entrusted the general charge of all the Government stallions and the training of salustries in the operation of castration. Special reports on these operations, which were confined to the districts above noted, were submitted during the year. At the beginning of the year the number of stallions was eight. Two more (13·2 high) were purchased in September; the number of mares covered during the season was 305. As far as the results of the coverings in previous years are known, the percentage of successful coverings was 28. In Coimbatore the number of mares brought to the stallions was small; the number was much greater in Salem.

47. In connection with pony breeding, the castrating operations commenced in the previous year were continued with great success in Salem where 288 tats or village ponies were castrated with only three casualties, but with less vigour in Coimbatore where the number castrated was only 67 during the year. It has been found possible to almost entirely dispense with the reward alluded to in paragraph 46 of the last report in Salem, but the grant of it is continued in Coimbatore.

48. Two salustries and two pupils are engaged in this work in Salem, and in Coimbatore one salustri and two pupils are at work under the orders of Mr. Shunker. Great difficulties were found in obtaining suitable men for these posts and the only one trained in Coimbatore during the year left the service soon after the end of it. Attention having been drawn to the defective training of the Stock Inspectors in castration, arrangements were made for the proper training of a few of them during the year, but it was not found possible to put many of them through a course of practice in this, owing to the general prevalence of cattle disease in many districts of the Presidency. During the year the question of the proper covering season to be adopted was the subject of considerable discussion; but the Government finally dicided that the point should be decided by the local officers; all that Government insisted upon was that the stallions should have an "off" season. This has been fixed at October to June both inclusive.

49. The Government decided, during the year, to extend the operations to the Nílgiris the arrangements have been made for giving effect to this decision. The number of stallions will have to be increased and that of the salustries in charge also.

50. *Cattle Disease Prevention.*—This branch of the work of the department was for the greater part of the year in charge of the Assistant Director in addition to his ordinary duties. Mr. Mills, who had been in charge of the work since August 1882, proceeded on short leave in January 1887, but resigned his appointment in August. His place was not filled up until the end of February 1888, when Mr. Veterinary Surgeon Hazelton of the Army Veterinary Department was appointed to it. The Deputy Inspector of Cattle Diseases, Mr. Shunker, was on duty during the whole year, but was almost exclusively employed in connection with pony and stock breeding operations. At the beginning of the year there were seventeen Stock Inspectors on duty in the districts and two probationers under training. One probationer was appointed Stock Inspector of Bellary and the other dismissed. Two Stock Inspectors resigned during the year. Mr. Hazelton's report on the operations of his branch of the department is appended to these Proceedings.

51. Considerable attention was given during the year to the system of reporting and recording cattle disease in the villages, and the forms and reports have been greatly simplified and systematised, and it is hoped that in future some degree of accuracy may be attained. That it will be successful is certain if the local officers will only pay attention to the working of the system, and the cattle disease prevention officers closely inspect its working. The village authorities have now to furnish or maintain (1) a report on the outbreak of disease (2) a weekly progress report of disease (3) a register of cattle deaths (4) a monthly return of cattle deaths, being an abstract of No. 3. The return No. 4 is tabulated in the Collector's offices by taluks and in the Board's office by districts and the figures forwarded to the Inspector of Cattle Diseases for his remarks.

52. During the year the ravages of cattle disease exceeded, as far as the recorded statistics show, any previous experience. Detailed statements are given in the appendix showing the number of deaths reported during each month of the year and for each district, of which the following is an abstract:—

Description of live stock.	Disease.						Deaths from other causes.
	Rinderpest.	Anthrax.	Foot and mouth.	Diarrhœa and dysentery.	Variola.	All other diseases.	
Cattle	116,558	34,432	2,763	3,966	733	15,771	88,851
Sheep and goats ..	5,180	1,816	211	959	3,373	5,430	29,644
Horses and ponies ..	3	..	3	2	..	31	101
Total ..	121,741	36,248	2,977	4,927	4,106	21,232	118,596
Report in previous year.	33,789	18,558	6,546	..	9,839	21,843	53,585

53. It is believed that rinderpest affects only the ruminantia and that epizootic aphtha does not affect the horse, so that the deaths of horses attributed to these diseases are probably inaccurately returned. The other returns also are not entirely free from suspicion, but show generally the state of the country as regards disease. On the whole, the loss to the agricultural community from disease amounted to 174,235 head of cattle, 16,958 sheep and goats and 39 horses and ponies, representing a value at very low rates of estimation of nearly twenty-six lakhs of rupees.

54. The principal scourges were rinderpest and anthrax, although amongst the sheep and goats variola caused a considerable mortality. Rinderpest was prevalent throughout the year, the mortality increasing from 4,781 cattle in April to 17,071 in December and only falling to 12,274 in March. It was prevalent in all districts, but especially virulent in South Arcot and Chingleput, in Kurnool and the Ceded Districts and in the Kistna, the deaths in the first two districts nearly reaching 50,000, and in the second group nearly the same figure. For the Kistna over 8,000 deaths were reported from this disease alone, and it has since spread into the Godávari. Anthrax also prevailed throughout the year, the number of deaths reported increasing from 809 in April to 5,110 in November and falling to 1,312 in March. The disease was particularly fatal in the Chingleput, North Arcot, Kurnool and Kistna districts, and Mr. Hazelton is of opinion that the figures do not approach the actual mortality, but does not explain why he thinks so. Amongst the deaths due to causes other than disease are included 44 cases of poisoning, 15 of which were reported from Tinnevelly and 10 from Malabar, 1,904 cases of snake-bite and 11,229 cases of deaths by wild animals.

55. The inaccuracy of the usual return of cattle and sheep kept renders any general comparison of the number of deaths with the number shown therein useless, but in the Kurnool district, where a special and tolerably accurate census of the live stock of the ryots has been taken, the deaths reported to have occurred from disease amount to 3·6 per cent. and those from all other causes to nearly 5 per cent. of the total number kept. It is probable that the census returns from that district are more accurate than those received generally from the districts in the Presidency. This would show that, whilst the total loss amounts to a sufficiently startling figure, the loss caused by disease—and disease was very fatal in Kurnool during the year—was not great on the whole.

(A true Copy and Extract.)

(Signed) P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ all Collectors.
„ the Inspector of Cattle Diseases.

APPENDIX I.

STATISTICS of mortality among cattle, sheep and goats, and horses and ponies in the Presidency of Madras for the year 1887-88.

Months.	Description of animals—cattle, sheep and goats, and horses and ponies.	Number of deaths due to Rinder-pest.	Anthrax.	Epizootic aptha.	Diarrhœa and dysentery.	Variola (sheep pox, &c.)	All other diseases.	Total.	Natural decay.	Accidents.	Snake-bites.	Poison-ing.	Wild animals.	Total.	Total number of deaths from all causes.
April	Cattle	4,781	809	190	143	193	1,382	7,498	..	4,136	143	5	492	4,776	12,274
May	Do.	4,051	1,118	204	155	45	1,021	6,594	..	4,399	95	5	507	5,006	11,600
June	Do.	3,791	1,519	216	197	26	1,191	6,940	..	7,652	154	4	643	8,453	15,393
July	Do.	5,422	3,039	207	116	85	1,606	10,475	5,628	916	144	1	689	7,378	17,853
August	Do.	6,979	3,668	131	118	57	1,454	12,407	5,010	712	183	2	734	6,641	19,048
September	Do.	7,762	4,187	149	119	12	1,318	13,547	4,163	748	191	3	705	5,818	19,357
October	Do.	9,440	4,098	234	287	47	1,692	15,498	..	6,797	238	..	727	7,762	23,260
November	Do.	13,783	5,110	205	314	33	1,433	20,878	..	6,553	170	17	671	7,411	28,289
December	Do.	17,071	4,425	378	566	46	1,456	23,942	..	12,459	175	1	807	13,442	37,384
January	Do.	15,827	3,371	335	361	26	935	20,855	6,655	675	142	..	596	8,068	28,923
February	Do.	15,677	1,776	228	473	36	1,112	19,302	6,132	371	88	2	508	7,101	26,403
March	Do.	12,274	1,312	286	1,117	127	1,171	16,287	5,947	439	101	4	512	7,093	23,290
	Total ..	116,558	34,432	2,763	3,966	733	15,771	1,74,223	33,535	45,857	1,824	44	7,591	88,851	2,63,074
April	Sheep and goats.	956	65	53	16	980	244	2,314	..	974	15	..	247	1,236	3,550
May	Do. ..	533	3	24	4	511	295	1,370	..	839	8	..	231	1,078	2,448
June	Do. ..	430	168	15	1	459	178	1,251	..	1,227	5	..	365	1,597	2,848
July	Do. ..	287	130	5	51	208	277	958	544	68	5	..	274	891	1,849
August	Do. ..	374	219	6	3	105	320	1,027	594	85	6	..	396	1,081	2,108
September	Do. ..	57	46	..	4	74	167	348	504	75	2	..	290	871	1,219
October	Do. ..	925	56	3	1	97	303	1,385	..	3,098	2	..	345	3,445	4,830
November	Do. ..	186	22	..	12	118	263	621	..	2,517	16	..	373	2,906	3,527
December	Do. ..	304	131	10	13	79	570	1,107	..	10,406	3	..	362	10,771	11,878
January	Do. ..	388	48	18	407	118	1,553	2,532	2,114	527	6	..	395	3,042	5,574
February	Do. ..	125	806	40	251	375	548	2,145	1,163	253	4	..	142	1,562	3,707
March	Do. ..	615	122	37	196	229	712	1,911	932	37	6	..	189	1,164	3,075
	Total ..	5,180	1,816	211	959	3,373	5,430	16,969	5,851	20,106	78	..	3,609	29,644	46,613
April	Horses and ponies.	..	..	..	..	..	5	5	..	10		..	1	11	16
May	Do. ..	..	..	3	..	..	..	3	..	10	..	..	1	11	14
June	Do. ..	..	..	..	..	..	5	5	..	14	1	..	3	18	23
July	Do. ..	..	..	..	..	..	5	5	4	3	..	..	3	10	15
August	Do. ..	..	..	..	..	..	6	6	2	3	1	..	3	9	15
September	Do. ..	1	..	..	..	..	3	4	3	6	..	..	4	13	17
October	Do. ..	..	..	..	1	..	..	1	..	5	..	..	1	6	7
November	Do. ..	1	..	..	..	..	3	4	..	3	..	..	1	4	8
December	Do. ..	..	..	..	..	..	2	2	..	4	..	..	2	6	8
January	Do. ..	..	..	..	..	..	1	1	..	..	..	..	6	6	7
February	Do. ..	..	..	..	..	..	1	1	1	..	..	..	1	2	3
March	Do. ..	1	..	..	1	..	..	2	1	1	..	..	3	5	7
	Total ..	3	..	3	2	..	31	39	11	59	2	..	29	101	140

APPENDIX II.

STATISTICS of mortality among cattle, sheep and goats, and horses and ponies in the districts of the Presidency of Madras for the year 1887-88.

Districts.	Description of animals—cattle, sheep and goats, and horses and ponies.	Number of deaths due to													Total number of deaths from all causes.
		Rinder-pest.	Anthrax.	Epizootic aptha.	Diarrhœa and Dysentery.	Veriola (sheep-pox, &c.)	All other diseases.	Total.	Natural decay.	Accidents.	Snake-bites.	Poisoning.	Wild animals.	Total.	
Ganjam	Cattle	763	585	16	92	217	564	2,237	491	452	52	..	82	1,077	3,314
Vizagapatam ..	Do.	422	151	28	..	..	279	880	418	557	21	..	33	1,029	1,909
Godávari	Do.	2,430	1,491	153	110	..	225	4,409	1,599	1,351	64	1	89	3,104	7,513
Kistna	Do.	8,268	5,964	166	1,569	3	215	16,185	944	264	76	..	59	1,343	17,528
Nellore	Do.	1,483	651	487	16	..	1,261	3,898	352	118	3	..	..	473	4,371
Cuddapah	Do.	7,032	1,016	58	45	..	338	8,489	550	758	26	4	163	1,501	9,990
Anantapur	Do.	16,620	19	130	31	1	1,300	18,101	1,483	1,314	10	..	51	2,858	20,959
Bellary	Do.	7,993	40	58	28	..	651	8,770	1,190	636	15	1	61	1,903	10,673
Kurnool	Do.	14,686	2,948	290	159	279	5,633	23,995	2,583	4,885	189	7	344	8,008	32,003
Madras	Do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	Do.	12,466	6,291	21	91	..	875	19,744	2,456	2,628	318	..	32	5,434	25,178
North Arcot	Do.	3,035	9,624	43	839	3	588	14,132	3,710	7,249	319	..	428	11,706	25,838
South Arcot	Do.	34,704	1,682	106	..	..	1,121	37,613	2,678	4,819	168	..	56	7,721	45,334
Tanjore	Do.	320	1,331	19	14	..	144	1,828	..	607	68	2	1	678	2,506
Trichinopoly	Do.	59	..	108	1	32	293	493	913	2,248	59	..	13	3,233	3,726
Madura	Do.	15	52	181	33	52	189	522	424	1,160	39	1	109	1,733	2,255
Tinnevelly	Do.	672	651	372	201	65	382	2,343	1,887	3,999	80	15	48	6,029	8,372
Coimbatore	Do.	186	273	27	176	37	669	1,368	901	1,715	56	3	493	3,168	4,536
Nílgiris	Do.	65	..	85	..	..	8	158	171	48	2	..	52	273	431
Salem	Do.	470	1,245	241	88	..	18	2,062	..	..	..	..	..	..	2,062
South Canara ..	Do.	4,741	418	106	29	4	552	5,850	3,629	3,400	36	..	2,536	9,601	15,451
Malabar	Do.	128	..	68	444	40	466	1,146	7,156	7,649	223	10	2,941	17,979	19,125
	Total ..	116,558	34,432	2,763	3,966	733	15,771	1,74,223	33,535	45,857	1,824	44	7,591	88,851	2,63,074
Ganjam	Sheep and goats.	3	5	..	4	2	4	18	8	16	3	..	19	46	64
Vizagapatam	Do. ..	..	..	7	..	..	9	16	26	59	..	..	51	136	152
Godávari	Do. ..	..	..	..	..	13	..	13	8	10	..	..	98	116	129
Kistna	Do. ..	346	77	..	..	..	..	423	12	47	..	..	60	119	542
Nellore	Do. ..	110	45	64	..	..	126	345	86	28	1	..	..	115	460
Cuddapah	Do. ..	324	64	19	4	546	607	1,564	26	283	..	..	563	872	2,436
Anantapur	Do. ..	399	..	8	121	309	1,139	1,976	184	117	..	..	211	512	2,488
Bellary	Do. ..	84	14	49	..	..	52	199	50	16	..	..	24	90	289
Kurnool	Do. ..	1,433	351	17	24	1,833	256	3,914	202	620	18	..	814	1,654	5,568
Madras	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	Do. ..	133	64	7	13	8	73	298	159	144	5	..	31	339	637
North Arcot	Do. ..	1,262	122	..	..	..	102	1,486	145	605	9	..	271	1,030	2,516
South Arcot	Do. ..	895	32	21	..	..	788	1,736	194	1,986	2	..	70	2,252	3,988
Tanjore	Do. ..	..	12	..	..	..	26	38	..	212	2	..	2	216	254
Trichinopoly	Do. ..	..	..	..	..	..	25	25	507	3,196	5	..	36	3,744	3,769
Madura	Do. ..	23	53	..	133	..	132	341	126	1,279	5	..	56	1,466	1,807
Tinnevelly	Do. ..	156	922	17	593	662	1,956	4,306	3,828	9,834	18	..	693	14,373	18,679
Coimbatore	Do. ..	1	28	..	62	..	128	219	155	1,512	6	..	446	2,119	2,338

Statistics of mortality among cattle, sheep and goats, and horse and ponies in the districts of the Presidency of Madras for the year 1887-88 —*cont.*

Districts.	Description of animals—cattle, sheep and goats, and horses and ponies.	Number of deaths due to Rinder-pest.	Anthrax.	Epizootic aptha.	Diarrhœa and Dysentery.	Variola (sheep-pox, &c.)	All other diseases.	Total.	Natural decay.	Accidents.	Snake-bites.	Poisoning.	Wild animals.	Total.	Total number of deaths from all causes.
Nílgiris	Sheep and goats.	..	..	..	..	..	..	..	3	..	..	..	6	9	9
Salem	Do. ..	11	27	2	4	..	..	44	..	..	..	..	..	..	44
South Canara ..	Do. ..	..	..	..	..	..	..	..	1	4	..	..	10	15	15
Malabar	Do. ..	..	..	..	1	..	7	8	131	138	4	..	148	421	429
	Total ..	5,180	1,816	211	959	3,373	5,430	16,969	5,851	20,106	78	..	3,609	29,644	46,613
Ganjam	Horses and ponies.	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vizagapatam ..	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Godávari	Do. ..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Kistna	Do. ..	..	..	..	..	..	..	..	..	..	..	..	2	2	2
Nellore	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah	Do. ..	..	..	..	..	..	..	..	..	2	..	..	1	3	3
Anantapur	Do. ..	1	..	..	..	..	..	1	..	5	..	..	1	6	7
Bellary	Do. ..	1	..	..	..	..	3	4	2	3	..	..	7	12	16
Kurnool	Do. ..	1	..	3	2	..	22	28	3	24	2	..	13	42	70
Madras	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	Do. ..	..	..	..	..	..	..	..	2	1	..	..	..	3	3
North Arcot ..	Do. ..	..	..	..	..	..	1	1	1	9	..	..	..	10	11
South Arcot ..	Do. ..	..	..	..	..	..	..	..	..	7	..	..	1	8	8
Tanjore	Do. ..	..	..	..	..	..	2	2	..	1	..	..	..	1	3
Trichinopoly ..	Do. ..	..	..	..	..	..	..	..	1	..	..	..	..	1	1
Madura	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevelly	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore	Do. ..	..	..	..	..	..	3	3	1	4	..	..	2	7	10
Nílgiris	Do. ..	..	..	..	..	..	..	..	..	..	..	..	2	2	2
Salem	Do. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Canara ..	Do. ..	..	..	..	..	..	..	..	1	..	..	..	..	1	1
Malabar	Do. ..	..	..	..	..	..	..	..	..	2	..	..	..	2	2
	Total ..	3	..	3	2	..	31	39	11	59	2	..	29	101	140

APPENDIX III.

Letter from E. H. HAZELTON, Esq., V.S., A.V.D., Inspector of Cattle Diseases, to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, dated Madras, 11th June 1888, No. 670:—

I have the honor to forward herewith the annual report of this department for the official year 1887-88.

ANNUAL Report of the Inspector of Cattle Diseases.

The strength of the department on the 31st March 1888 was as follows:—

Inspector	1
Deputy Inspector	1
Stock Inspectors	17

2. The Inspector proceeded to Europe on leave on 2nd May 1887, and subsequently resigned his appointment.

3. I was appointed as Inspector of Cattle Diseases on February 28th, 1888, Mr. Benson having been in charge of the department in the meantime.

4. The Deputy Inspector has been solely employed in the superintendence of pony-breeding operations in Salem and Coimbatore districts, and the stock farm at Hosúr. He also gave a course of instruction in castration to some of the Stock Inspectors and one Probationer in the months of August and September 1887.

5. Of the two probationers who were entertained during the previous year, one has been posted as Stock Inspector to Bellary district, and the other was dismissed for insubordination.

6. Stock Inspectors T. Ramanjulu Naidu and B. Venkata Dasappah resigned their appointments, and a passed agricultural student, Streenevassa Ragava Iyengar, was given an acting appointment as Stock Inspector in Tanjore district pending his passing the prescribed examination. Stock Inspectors have been working in every district in the Presidency, but only for part of the year in the districts noted below:—

Bellary.
Cuddapah.
Godávari.
North Arcot.
Tanjore.
Vizagapatam.
Coimbatore.
Ganjam.
Nílgiris.
Salem.
Trichinopoly.

With regard to the work done by the Stock Inspectors, I am not in a position to give any information at present, but will do so in the report for the current year.

7. The veterinary hospital at Saidápet was transferred to the Educational Department in January last. A statement of cases treated is given below:—

Cases remaining on 1st April 1887	7
Cases admitted during the year	94
Total ...	101
Cured	74
Relieved	11
Died	8
Destroyed	3
Remaining at end of year	5
Total ...	101

8. Medicines in large quantities have been supplied to the various districts with instructions for use, and many of the Stock Inspectors speak favorably of their utility.

9. *Office.*—The compilation of the statistics of the mortality from cattle disease in the Presidency has been undertaken by the Board's office. The office of the Inspector of Cattle Diseases has been removed to Chepauk. The pay of the clerk has been raised from Rs. 25 to Rs. 35 a month, and a compounder has been sanctioned in G.O., No. 128, dated 7th February 1888.

10. *Financial Statement.*—The estimated budget grant for the official year 1887-88 was Rs. 33,584; expenditure Rs. 28,587-8-2. The saving was due principally to the absence of the Inspector on leave.

11. The receipts on account of treatment of cases, &c., have been Rs. 398-9-1 as against Rs. 546-9-3 in the previous year, a decrease Rs. 148-0-2.

12. *Agricultural Exhibition.*—I attended the Salem agricultural exhibition in March, and officiated as a judge in one of the sections. No outbreak of contagious disease occurred in the animals shown.

13. *Cattle Poisoning.*—In the marginally-noted districts no cases of criminal poisoning have been reported or brought to light by the Stock Inspectors. In Malabar a few suspected cases were met with, but none were proved.

South Canara.	Coimbatore.
Tinnevelly.	Kurnool.
Trichinopoly.	Anantapur.
Madura.	Bellary.
Salem.	

In South Arcot district 9 cases were brought to the Stock Inspectors notice in Chidambaram taluk, but he "regrets to remark that the village officers and cattle owners were so careless as to preserve profound silence on the subject for more than a month, when the police were communicated with." The cases were committed to the nearest magistrate, and several doses of arsenic were found in the possession of the supposed culprits, who were dismissed for want of sufficient evidence of the identity of those who administered the poison. Then, after an interval of 7 months, the Stock Inspector was sent to investigate the matter, and he submitted a report when the case was re-opened, but again dismissed on the same grounds.

The North Arcot Stock Inspector reports that no cases of cattle poisoning with arsenic or other metallic poison came to his notice, but mentions a case of wholesale poisoning in a village in Wandiwash taluk, by two pariahs, who exhumed the carcass of an animal dead from rinderpest, and steeped the flesh in the drinking water of the village cattle. They were caught in the act and convicted, being punished by a fine * of Rs. 15 each. The pariahs are supposed to have introduced the decease into the village by bringing parts of the carcasses of an animal dead from rinderpest into it.

The Stock Inspector of the Nellore district states that in the village of Alturti, Rápúr taluk, he met with a case of cattle poisoning, held a postmortem examination and sent some of the viscera to the village magistrate to forward for analysis. He also states that chucklers of that village prepare the poison and distribute it to their immediate relatives for use and that this practice has been going on in that neighbourhood for 30 years.

14. *Act II of* 1866 was brought into operation in the districts of Kurnool, Bellary, Madura and South Canara. I can give no particulars as to the working of this Act at present, but will do so in the next annual report.

15. *Cattle Fairs.*—Stock Inspectors have visited the following cattle fairs during the past year.

Mecheri fair, Salem district, held on 26th February; closed on March 1st, 1888. About 1,000 head of cattle were brought to the fair, consisting mainly of the Alambadi and Kolar draught cattle; also some Tiruchengód dairy cattle. The sanitary arrangements were good and no contagious disease was discovered.

Karamadai fair, Coimbatore district. About 3,000 head of cattle were present, mostly draught bullocks; no breeding bulls. The sanitation was carefully superintended and no contagious disease appeared.

Chittrai Fair, Madura district, held at Thallaculam. About 17,000 head of cattle present. The Act II of 1866 was brought into operation, and all diseased animals were removed to the hospital pounds. Foot and mouth disease broke out and was repressed.

Keyoor fair, Malabar district, brought together a large number of cattle, many from Coimbatore.

Subramania fair, South Canara district. About 35,000 cattle present; the sanitary arrangements were good and there was no outbreak of disease. Act II of 1866 was introduced.

Tiruvannámalai fair, South Arcot district, is held in December. Large number of cattle from surrounding districts present. There was no outbreak of disease.

Mutulapuram fair, Tinnevelly district, is held in July. The water-supply was very scanty, and the animals had to be taken long distances for water. Cattle came from Coimbatore and Madura, but the majority belonged to the district. No disease was reported.

Kalagamalai fair, Tinnevelly district, held in January. About 5,000 head of cattle arrived, including 100 dairy cows. The sanitary arrangements were satisfactory, and no outbreak of disease occurred.

16. *Cases treated by Stock Inspectors.*—The following number of animals were treated by the Stock Inspectors during the months of December 1887, January, February and March 1888.

* This seems a most inadequate punishment for so grave a crime.

20th June 1888.

(Initialled) W. W.

No accurate records exist for the preceding months of the past year. Rinderpest and anthrax were practically the only diseases treated :—

Cases admitted	1,568
Do. cured	476
Do. incurable	3
Do. died	254
Do. destroyed	11
Do. unknown	713
Do. remaining on the 31st March 1888	111

From the above it will be noticed that only 16—19 per cent. of cases treated died, but there is a large number of cases unknown in consequence of the Inspectors having to leave the villages before the cases terminated.

17. *Remarks.*—The Stock Inspector of Nellore district notes a great mortality among pigs and dogs in a village of Ongole taluk, caused by feeding on carcasses of sheep which had died of Braxy (anthrax) and which had been the principal food of these animals. The symptoms presented were undoubtedly those of anthrax. The same Inspector also notes that wherever rinderpest prevailed among cattle there was no cholera to be met with in man, and that the former seemed to drive away the latter.

The Stock Inspector of North Arcot when on special duty in Kurnool noted the great value of common salt in the treatment and prevention of rinderpest. He states that the disease soon disappeared on the removal of the animals to saline pastures.

The following is an extract from a letter from the Stock Inspector of North Arcot on special duty in Kurnool, to the Collector of Kurnool, dated 9th July 1887.

* * * *

"I am convinced that the ryots were formerly in the habit of giving earth-salt to their cattle daily during the summer and once a week or so at other times, and that since the prohibition of the local manufacture of salt from saline earth, the value of sea-salt has risen so high as not to be within the reach of ordinary ryots to give to their cattle. In some villages where there is a saline waste as pasture the disease has subsided sooner, when other precautions against its spreading (viz., cremation of the diseased carcasses and disinfection of their skins) were strictly observed; at other places, such as Rámallakót, Maddarpur and Narlapur, where the ryots gave common salt as advised, there was a better result and a speedy check over the spread of the disease."

18. During the month of March I was occupied in acquainting myself with the constitution and routine work of the department, and I only visited the districts of Chingleput and Salem (the latter in connection with the agricultural exhibition).

As I have been such a short time at the work, I am unable to add any remarks on the prevalence of cattle disease and the repressive measures adopted from my own experience, but I will do so in the report for the current year.

Order—dated 18th December 1888, No. 872, Revenue.

Miscellaneous.

The majority of the subjects referred to in the foregoing report have already been dealt with in separate orders and there is little which now requires the notice of Government. It is presumed that the allusion in paragraph 4 is to the rejection of the proposals for strengthening the staff of Revenue Inspectors. The Government are not aware of any other proposals for improving the inspection of village records which have received their approval.

2. His Excellency in Council regrets that, owing to the analytical report on the Kurnool district not having yet been issued, he is unable to form a definite opinion of the work done during the year by the Assistant Director. It was stated in the administration report for 1886-87 that it only remained to tabulate the statistics and to compile the analysis, but although the Inspectors engaged upon the collection of the statistics were brought to head-quarters to assist Mr. Benson, that officer seems to have taken a whole year to complete the analysis. The present report contains no information regarding other work performed by him.

3. In reviewing the report for 1886-87, the Government drew attention to the necessity for further information regarding the work of the local Cattle-Disease

(now Stock) Inspectors and requested that the omissions which were noticed might be supplied in future reports. This, however, has not been done, and though the Government admit that Mr. Hazelton, who was only in charge of this branch for the last month of the year, could not be expected to give a complete account of the work done by his subordinates, they consider that something more than the meagre information afforded might have been furnished by the Director. So far as can be gathered only 1,568 cattle were treated by the Stock Inspectors, of which 476 were cured, 265 died, 3 were incurable, 111 remained under treatment at the end of the year, and in 713 cases the results were not known. Nothing is said as to the establishment or working of hospital pounds or of other operations under Act II of 1866. So far as this report shows, there has been no satisfactory return for an expenditure of nearly Rs. 30,000 on the cattle-disease department. The total number of cattle that died from disease was 174,223, but the number of those attacked is not given, so the Government have no adequate means of judging by comparison with former years whether the indirect efforts of Stock Inspectors have appreciably affected the destruction caused by cattle-diseases. Judging, however, from the statistics given as regards the Kurnool district, the total mortality among cattle does not appear to exceed 9 per cent., a figure which, having regard to the rate of reproduction, is quite consistent with a rapid increase of stock.

The Government observes with satisfaction that there were no cases of cattle poisoning in Anantapur during the year. They agree with the Director that a fine of Rs. 15 is an inadequate punishment for deliberately poisoning a cattle-pond.

4. The results of the work of the department during the year, so far as they are shown in a report which is clearly not so complete as it might have been, cannot be regarded as satisfactory, but His Excellency in Council trusts that the work of the committee which he has recently appointed will furnish material for forming conclusions as to its real effect, and that the committee will be able to devise measures for making the expenditure of the State on agriculture of more direct benefit to the ryots than has been the case in the past.

(True Extract.)

(Signed) C. A. GALTON,
Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Commissioners of Land Revenue.
„ the Government Botanist.
„ Secretary to the Committee apointed in G.O.,
25th September 1888, No. 686.

No. 872-A, Revenue.

Copy to the Government of India, Revenue and Agricultural Department.

(Signed) C. A. GALTON,
Secretary to Government.